AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1.   (Currently Amended) A control system for detecting nozzle wear in an industrial shower header including one or more spray nozzles, comprising:

a flow sensor disposed to monitor an actual flow rate of liquid through the shower header;

a pressure sensor disposed to monitor an actual operating pressure of liquid applied to the shower header; and

a controller connected to the flow sensor and pressure sensor for receiving signals therefrom, the controller ~~being configured to determine~~ including means for determining a calculated flow rate for the actual operating pressure, the controller including

~~compare~~ means for comparing the calculated flow rate with the actual flow rate and ~~create~~ for creating a feedback signal when a difference between the calculated flow rate and the actual flow rate exceeds a threshold, and

provide means for providing the feedback signal to the spray system to adjust an operating condition thereof based upon the performance of the spray nozzles in the spray header.

2.   (Original) The system of claim 1 wherein the feedback signal is operative to initiate a cleaning cycle or alarm warning.

3.   (Previously Presented) The system of claim 1 wherein the controller includes a look-up table with entries for liquid flow rate at various discrete operating pressures of the nozzles.

4.   (Previously Presented) The system of claim 3 wherein the controller is configured for interpolating between the discrete operating pressures in the look-up table for determining the calculated flow rate for the actual operating pressure.

5.   (Canceled) A method for monitoring the performance of a spray header having one or more spray nozzles in an industrial spraying system, comprising:

measuring an actual operating pressure of liquid applied to the spray header;

determining a calculated flow rate for the actual operating pressure;

measuring an actual flow rate of liquid applied at the spray header to derive an actual flow rate;

comparing the actual flow rate with the calculated flow rate;

determining whether a difference between the actual flow rate and the calculated flow rate exceeds a pre-selected threshold; and

providing an output signal for adjusting an operating condition of the spraying system when the difference between the actual flow rate and the calculated flow rate exceeds the threshold.

6.   (Currently Amended) A spray controller for providing a signal indicative of nozzle performance detection in an industrial shower header including one or more liquid spray nozzles, comprising:

a first connection to a pressure sensor for receiving a signal indicating an actual operating pressure of liquid applied to the shower header;

a second connection to a flow sensor for receiving a signal indicating an actual flow rate of liquid applied to the shower header;

a microprocessor ~~programmed to determine~~ including

means for determining a calculated flow rate for the actual operating pressure;

~~compare~~ means for comparing the calculated flow rate with the actual flow rate and to create a feedback signal when a difference between the calculated flow rate and the actual flow rate exceeds a threshold; and

~~provide~~ means for providing the feedback signal to the spray system to adjust an operating condition thereof based upon the operation of the liquid spray nozzles.